Army Shelters and Base Camp Operations

Serving Our Army at War – Relevant and Ready!

LTC Lawrence Silas
PM Force Sustainment Systems
COMM 508-233-5312
DSN 256-5312

Thomas Watt DSN 256-6451

FOCUS AREAS

- ***Who we are***
- ***Where we are located***
- ***What we do***
- ***Who we do it for***
- ***Where we are today with our programs***
- ***What the future holds***

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Who we are

PEO:
BG Patrick O'Reilly

DPEO (Interim):
Ms. Patricia Plotkowski

PM Force Projection
COL Tim Goddette

- PM Army Watercraft Systems — *LTC Phil Schoenig*
- PM Petroleum & Water Systems — *LTC Francisco Espaillat*
- PM Combat Engineer Systems — *LTC Carol Solesbee*
- PM Force Sustainment Systems — *LTC Lawrence Silas*

PM Tactical Vehicles
COL Robert Groller

- PM Heavy Tactical Vehicles — *LTC Lisa Schleder-Kirkpatrick*
- PM Light Tactical Vehicles — *LTC Kevin Peterson*
- PM Medium Tactical Vehicles — *Mr. David Dopp*
- PM Trailers — *LTC John Myers*

PM Combat Systems Support
Mr. Bob Szerszynski

- PM Small Power Systems (USMC) — *LtCol Nate Tabbert*
- PM Medium Power Systems — *LTC John Kelleher*
- PM Large Power Systems (USAF) — *Mr. Ray Billings (Acting)*
- PM Sets, Kits, Outfits & Tools — *Mr. Wayne Schaaf (Acting)*
- PM Test, Measurement, & Diag. Eq. — *LTC Dwayne Morton*

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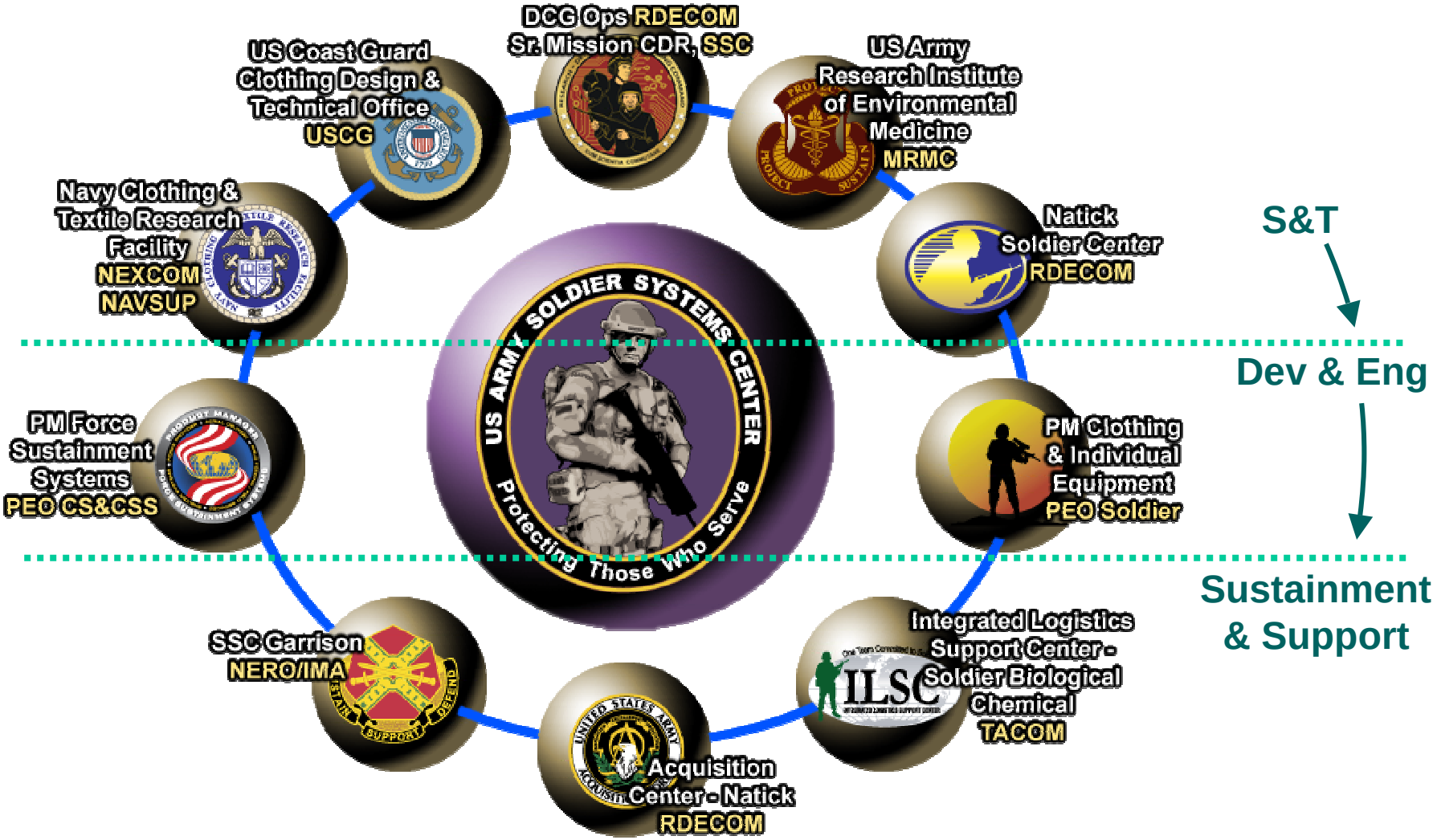
PM Force Sustainment Systems
A Member of the Force Projection Team

Where we are



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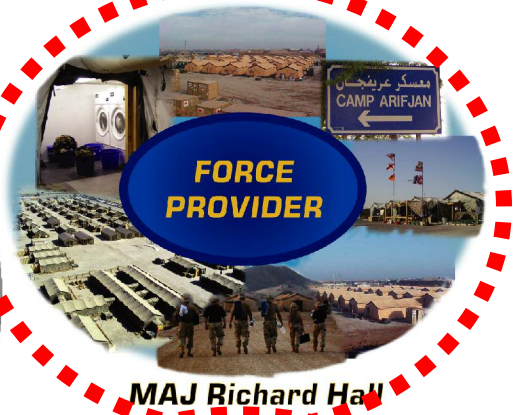
What we do

LTC John O'Regan

PRODUCT MANAGER
FORCE SUSTAINMENT SYSTEMS
FORCE PROVIDER ★ AERIAL DELIVERY ★ FIELD FEEDING / FIELD SERVICES ★ SHELTER SYSTEMS

LTC Lawrence Silas
Mr. James McLaughlin



MAJ Richard Hall

Mr. Tim Benson

MAJ Carlos Correia

Mr. Tim Benson

Over 40 Programs

Over 100 Personnel (Matrix & Core) 3 Sites

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Who we do it for

Principal Combat Developer Stakeholders

Engineer Center

Combined Arms Support Command

Aviation Center

Mix & Match Modularity to Provide a Full Menu of Capabilities

Chaplains' Center

Quartermaster Center

Ordnance Center

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United States Army
Combined Arms Support Command Mission:

Develop logistics leaders, doctrine, organizations, training, and materiel solutions to sustain a campaign quality Army with joint and expeditionary capabilities in war and peace.

Role of the Combat Developer:

Combat developers provide the skill set and knowledge to integrate the basic concepts and principles of doctrine, combat and training developments as part of the requirements determination and acquisition process.

DCD-QM
Combat Developements for Quartermaster
(804) 734-2291

PM Force Projection Family

Our system acquisition managers, engineers, logisticians, program and procurement analysts and support staff take pride in providing materiel development solutions to meet the strategic objectives of the Army Vision.

Role of the Material Developer:

Material Developers/Product Managers develops, produces, fields and sustains world-class materiel solutions to meet current and future support requirements of the U.S. Military across the operational spectrum.

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Shelter Systems

Modular General Purpose Tent System (MGPTS)

- **MGPTS was Type Classified as the standard General Purpose Tent for the Army in Oct 1999**
- **Currently there are only 2 approved configurations of MGPTS:**
  - **Type I – Pole Supported**
  - **Type II – External Frame Supported**
- **Designed for use as troop billeting, humanitarian relief, command and control, storage application, and limited maintenance functions.**
- **Over 17,000 MGPTS in the field today.**
- **MGPTS is a Common Table of Allowance (CTA) item.**
- **DSCP is the item manager of the MGPTS. Currently DSCP is acquiring large quantities of MGPTS in a follow-on, multi-years, full rate production contract utilizing performance specification.**

MGPTS
Pole-supported, modular & more habitable replacement for current General Purpose (GP) Small, Medium & Large tents

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Shelter Systems

Modular Command Post System (MCPS)

- **MCPS was Type Classified Standard for the Army in Feb 1990**
- **Designed to be quickly assembled and struck providing environmental protection developed for command post users Army-wide and used in all ranges of operating environments.**
- **Over 18,000 MCPS tents in the field today.**
- **MCPS is a Common Table of Allowance (CTA) item.**
- **DSCP is the item manager of the MCPS.**

MCPS
Highly mobile, lightweight, configurable command tent system

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Shelter Systems

Standardized Integrated Command Post System (SICPS-M) Medium

- **PM FSS developed the SICPS- M for the Project Manager Tactical Operations Center (PM TOC).**
- **The SICPS- M tent is a modified TEMPER. Intended to replace 4 MCPS tents for the Brigade, Division, and Corps Level Command Posts (CP).**
- **Provides workspace, power distribution, lighting, environmental conditioning (heating and cooling), tables, cable management and lightweight/integrated flooring for the staffs of all battle operating systems.**
- **PM TOC received 8 SICPS-M for SBCT 3 and 8 SICPS- M are stored on the Trailer Mounted Environmental Control System (TMECS) for SBCT 4. Three additional TMECS w/SICPS-M tents have been delivered to support PM TOC testing efforts for a new SICPS Command Post Platform (CPP).**
- **The SICPS- M tent system has complete performance based specs to include applicable technical data drawings, provisioned parts and components and a Technical Manual available to support future acquisitions if required.**

SICPS-M
Highly mobile, lightweight, configurable command tent system

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Shelter Systems

Lightweight Maintenance Enclosure (LME)

- LME was Type Classified Standard for the Army in Mar 1999.
- LME meets requirements for repairing tracked and wheeled vehicles in the Unit Collection Point, Brigade Support Area, and Tactical Assembly Area of the battlefield. LME is used during all levels of conflict/training in all environmental conditions.
- Over 6,000 LMEs in the field today.
- LME is an OPA funded item being fielded IAW Department of the Army Master Priority List (DAMPL)
- The Army (PM FSS) is currently in Option Period 1 of a follow-on, multi-year, full rate production contract for the Performance Spec LME.
- LMEs have been fielded to active duty units in the Army, Reserve and National Guard. LMEs have also been fielded to the Marine Corps.

LME
Lightweight, mobile replacement for the Fritsche maintenance shelter for tracked & wheeled vehicles across the battlefield under all climatic conditions

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Shelter Systems

Current Posture

• DLA/DSCP is developing a product awareness guide for Field Commanders to better support the procurement of shelter systems acquired with the use of OMA funding.

- Lessons learned have indicated both positive and negative results of uninformed decisions acquiring shelter systems.

- DSCP along with CASCOM and the PM will establish the performance criteria

Interim

• Army will continue to allow Field Commanders to spend OMA funding for shelter systems.

Future

• CASCOM is working with TRADOC to identified requirements for future shelter contracts

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Why Force Provider

The Force Provider concept was established in 1991 as a result of inadequate living conditions for our soldiers during Desert Storm and Desert Shield. General Sullivan, Chief of Staff of the Army directed the development of a containerized highly deployable city.

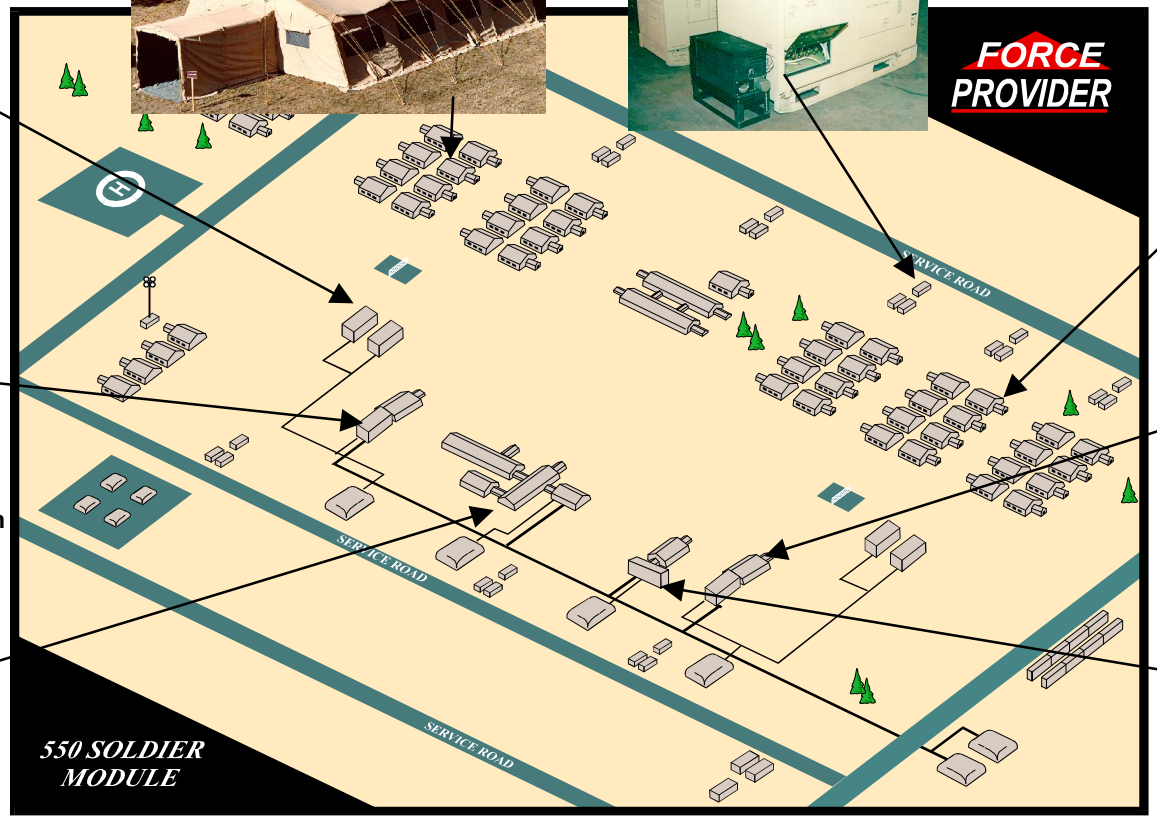
Containerized Latrine System

Containerized Shower System

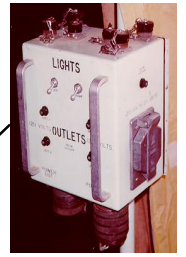
Electric Kitchen

TEMPER Tent

60kW Generators



Power Distribution Box



Shavestand

Containerized Batch Laundry

The Way it Was

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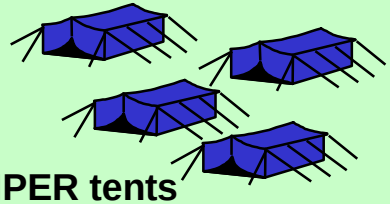
Force Provider Capabilities

All materiel necessary to provide quality food, billeting, hygiene services and MWR for 550 personnel



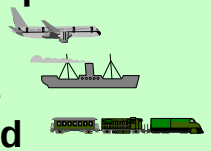
- •Kitchens
- •Laundry, showers, latrines
- •Air conditioned/heated TEMPER tents
- • Power Generation or Prime Power Conn Kit
- • Cold Weather Kit

Containerized - ready for deployment

Compatible with Air Force systems

Transportable

- •Air
- •Sea
- •Land



Missions (Wartime & Peacetime)

- • Intermediate Staging Base
- •Theater Reception/Staging
- •Nation Building
- •Interagency Support
- •Disaster Relief/Humanitarian Aid
- • Rest & Refit

Requirement = 56 AAO

- • 35 deployed in AOR
- • 7 In Production
- • 4 PACOM
- • 1 Prepo-Ship
- • 2 In Reset
- • 6 Unfunded

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Containerized Batch Laundry (CBL)

Capabilities: Provides capability to wash and dry 200 lbs of clothes per hour, in a clean and safe environment. This system is capable of collecting the waste water and transferring it up to 500' from the container. The system is equipped with water reuse capability capturing 60% of the water used.

Description: 2-50 lbs. washers/extractors, 2-75 lbs. dryers (both commercial), exhaust fan, all hoses and connections.

Power requirements: 100kW/208 volt/3-ph

Size: 20'x8'x8' ISO Container

Weight: 10,000 lbs

1 unit per module

(1 CBL + 2 TRICONs)

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Containerized Latrine System (CLS)

Capabilities: Provides capability for latrine services for 175 soldiers with individual privacy and increased sanitation.

Description: 6-low water flush toilets w/ privacy stalls, a trough urinal, 2-waste collection tanks, 2-sinks w/running hot/cold water, one 6-gallon water heater, mirrors, and dispensers for toilet paper, paper towels and soap. Each stall has hooks and shelves to accommodate the soldier's equipment. Commercial heater/AC unit installed in the rear wall to regulate internal temperature w/ a fan mounted on front wall to provide ventilation.

Power requirements:
5kW 3 phase/60 amp connector

Size: 20'x8'x8' ISO Container

Weight: 8,000 lbs

4 units per module

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Containerized Shower System (CSS)

Capabilities: Provides a clean environment for soldiers to shower w/privacy. Each shower stall has individual controls for adjusting water pressure and temperature. Allows 72 soldiers to shower per hour (10 minute shower). System capable of collecting waste water and pumping it up to 500' for disposal/storage.

Description: 12-commercial, fiberglass shower stalls, onboard ejector pump, and M80 water heater.

Power requirements: 10kW/120 volt/single phase

Size: 20'x8'x8' ISO Container

Weight: 8,500 lbs

2 units per module

(2 CSS + 6 TRICONs)

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FP tent based all electric kitchen

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FP Dining Hall

"I did not expect this much great luxury. I will surly not take these privileges for granted." --

PFC Lopez, HHC 1/505 PIR

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Morale, Welfare and Recreation

<u>Capabilities:</u> Provides the deployed soldiers with morale, welfare and recreation support.

<u>Description:</u> Satellite television, sports equipment, free-weight equipment, board and card games, movies, books, table tennis, football, softball, volleyball, basketball, soccer and horseshoe equipment.

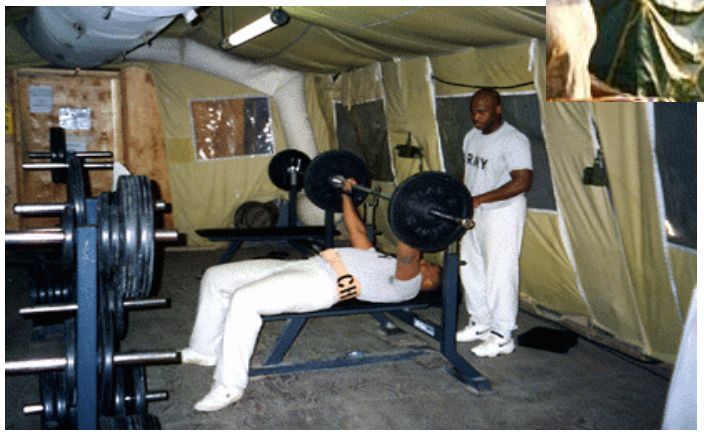
<u>Power requirements:</u> 208 volts/3 phase

<u>Size:</u> 2-64' TEMPER

<u>Weight:</u> n/a

1 per module

(1 ISO + 4 TRICONs)



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Morale, Welfare and Recreation

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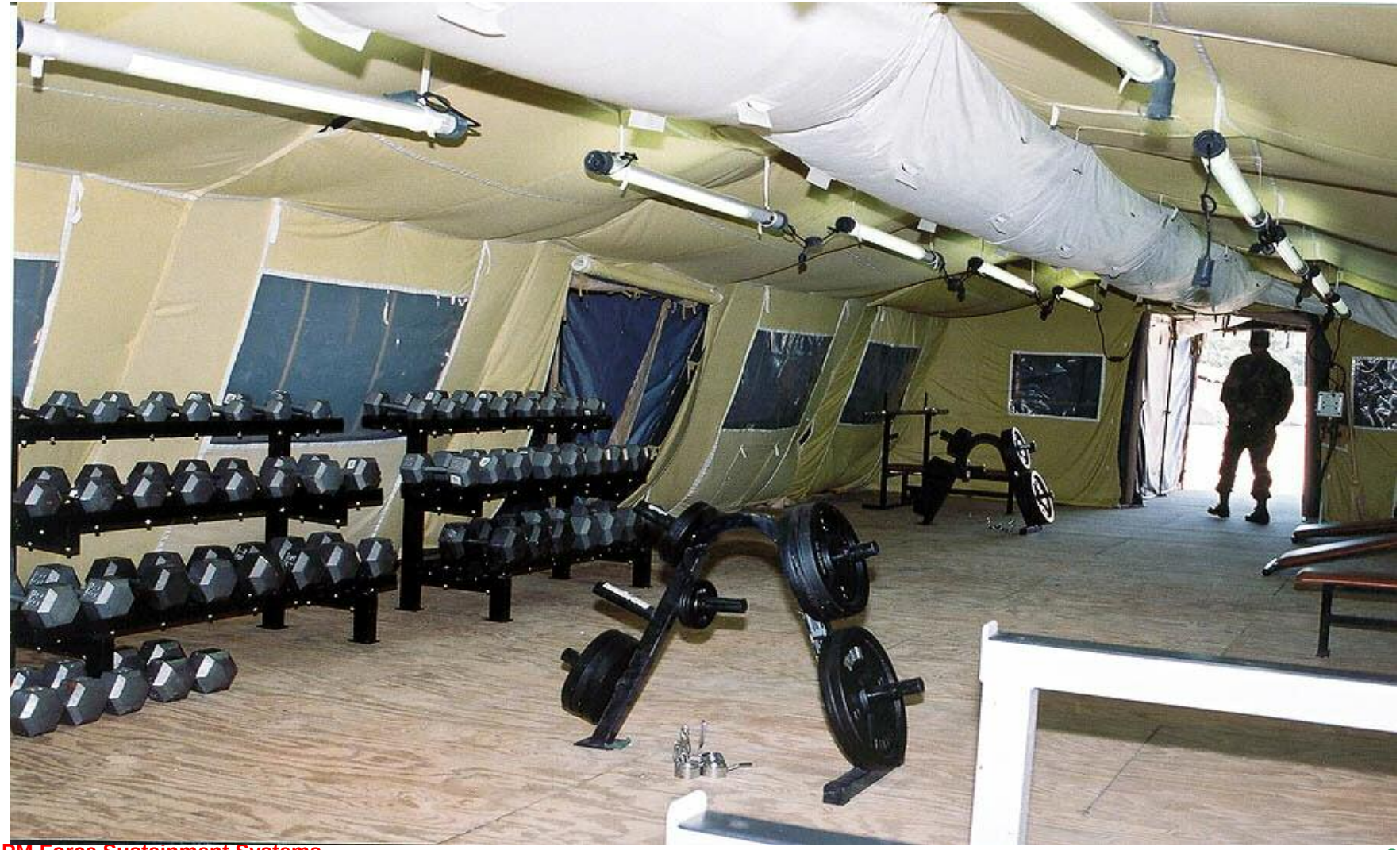
Morale, Welfare and Recreation



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Cold Weather Kit (CWK)

Capabilities: Add-on kit to allow Force Provider to operate down to -15ºF. Provides heat to all living/operational areas.

Description: 68-Army Space Heaters (ASH), tools and equipment to assist in cold weather deployment. Provides 6-64' TEMPER for storage of water and waste water bladders and heat traced hose.

Power requirements: 208 volts/3 phase

Size: n/a

Weight: n/a

(25 TRICONs per CWK)

AO = 12

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Power Generation/Distribution

Note: ½ the modules come with organic generators and ½ are dependent upon Prime Power or Commercial power

Capabilities: Provides power to run entire camp, 208V, 50/60Hz, 3 phase; w/ generators, Prime Power Support or Host Nation Power.

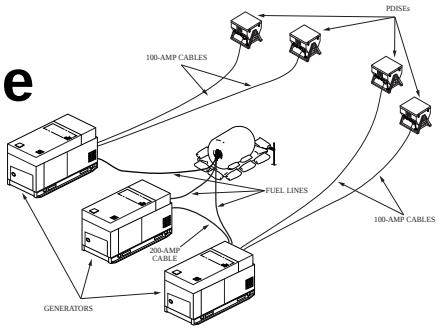
Description: 24-60kW Tactical Quiet Generators (TQGs) (18 running at all times), 39 100A DISE boxes distribute power to camp; Prime Power Connection kits; or the ability to connect w/ host nation power.

Power requirements: 1.1 MegaWatts continuous power

Size: 7'x3'x6' (generator)

Weight: 4,240 lbs.

24 units per module (rolling stock)



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Prime Power Connection Kit

Capabilities: The PPCK is designed to provide the link between the Force Provider secondary distribution system and the Prime Power generator sets or commercial power (4160V Delta). Other commercial power requires additional transformers to step down.

Description: The components are all commercial off the shelf items (transformers, cable, and medium voltage connection equipment) purchased from well known large electrical manufacturers such as Raychem, Square D, ABB and Wesco.

Power requirements: Supports a Prime Power generation plant.

Size: 12 TRICONs

Weight: NA

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FP Training and Test Facilities
Ft Polk, LA – Ft Lee, Virginia

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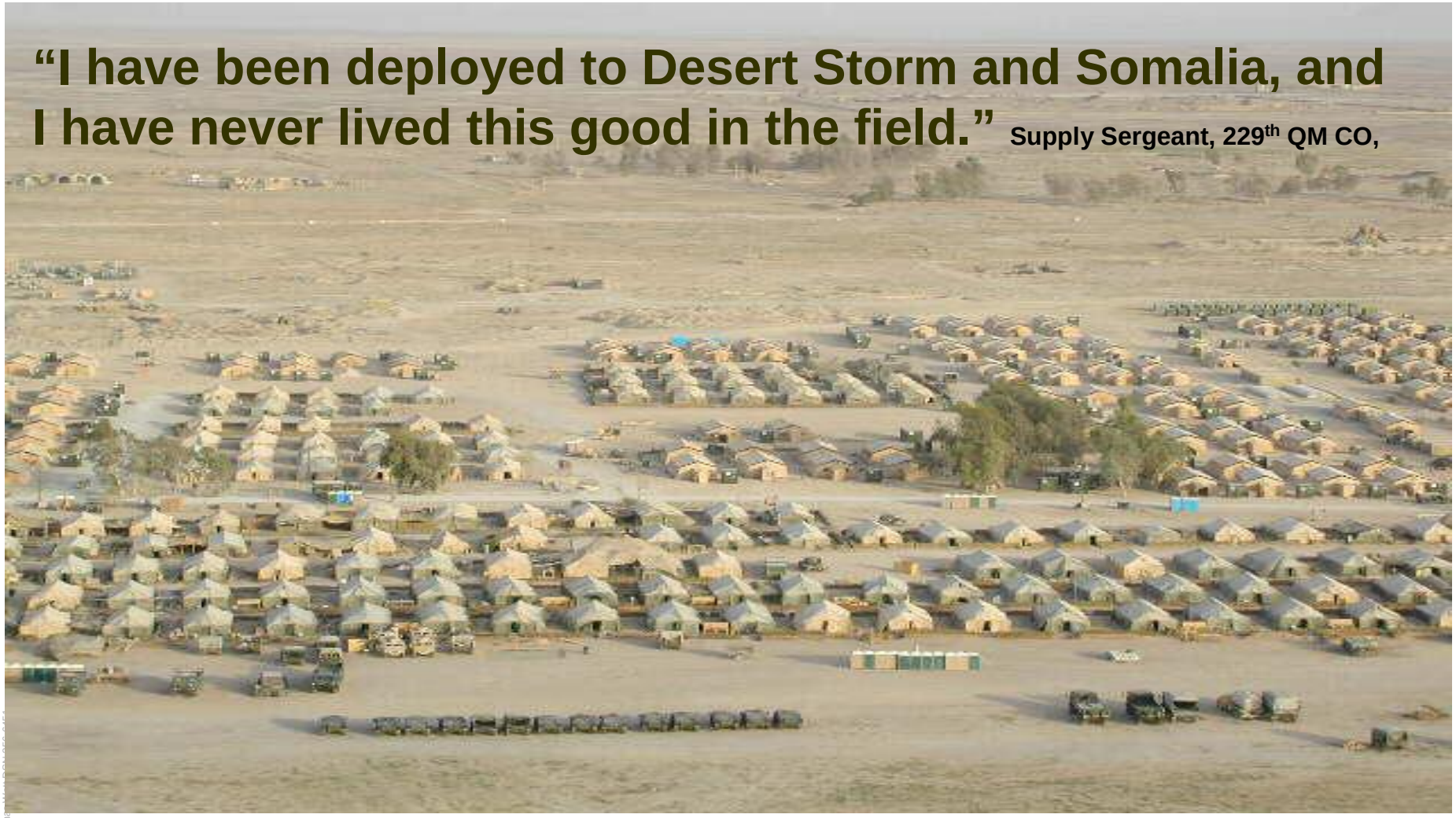
Afghanistan – 2001-Present



Kyrgyzstan– 2001-Present

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Ganci, Air Base - Biskek

"Force Provider beats the heck out of Harvest Eagle/Falcon (AF system)."

LtCol Rumsey, Air Force, Ganci Base Camp Mayor

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Current Situation

Force Provider

- 35 Force Provider modules are deployed in support of OIF/OEF (3+ yrs.)
- Units establishing 150-man Forward Operating Bases
- Current 550+ base camp configuration not scalable to break-up module to support the modular force
- Army IPT evaluating potential of building a 150-man sustainment capability

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Where are we going tomorrow

Modernization Strategy

Reduction in logistical burden

Reduce Set-up Time/Footprint

Reduce Transportation/deployment requirements

Potential Goals

Reduce shipping cube by 10%

Reduce footprint / required set up time by 50%

Reduce logistics requirement by 50%

Reduce module cost by 20%

Smaller modules – scalability, modularity, deployability, and the capability to be delivered in smaller sets to support forces ranging from company (150 personnel) to Unit of Action Brigades (3600 personnel)

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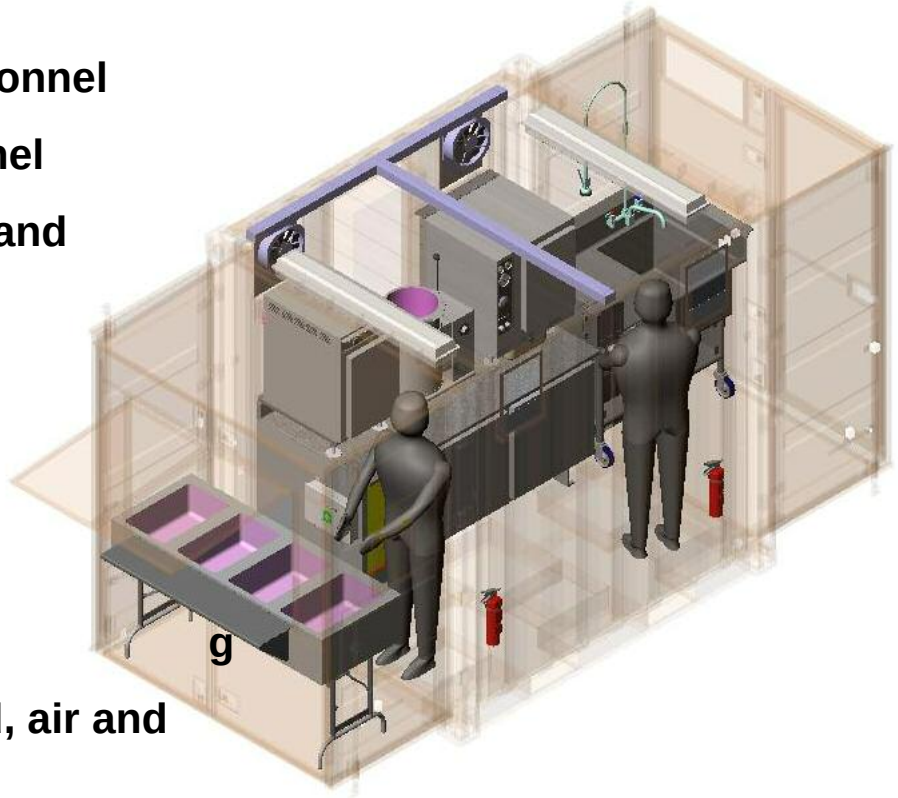
Expeditionary Tricon Kitchen

Capabilities

- Provides 3 meals per day for 150 personnel
- Setup time: 30 minutes with 2 personnel
- Supports smaller expeditionary units and austere tent camps
- Environmentally Controlled
- Modular/Scalable & meets ISO requirements
- Can operate as a stand-alone system
- Containerized and preconfigured g
- Movement by any combination of land, air and sea
- Highly mobile, weigh less than 10k lbs, sling load and folk liftable



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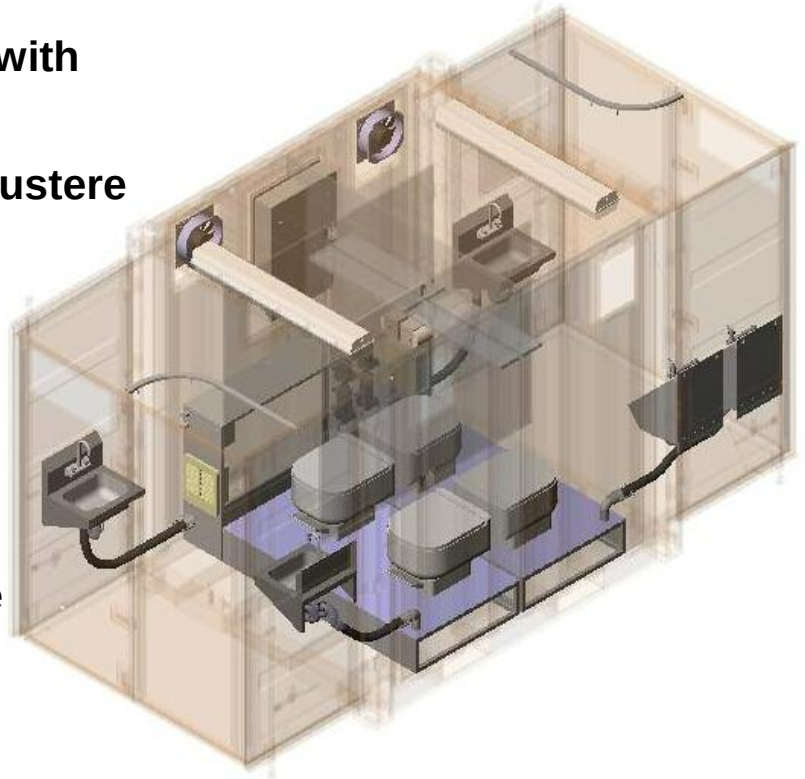
Expeditionary Tricon Latrine System

Capabilities

- Provides latrine services for 150 personnel with individual privacy and increased sanitation
- Supports smaller expeditionary units and austere tent camps
- Setup time: 30 minutes with two personnel
- Four low water drop flush toilets and trough urinal
- Sinks with running water
- Separate entry on each side for male/female use
- Environmentally Controlled
- Modular/Scalable & meets ISO requirements



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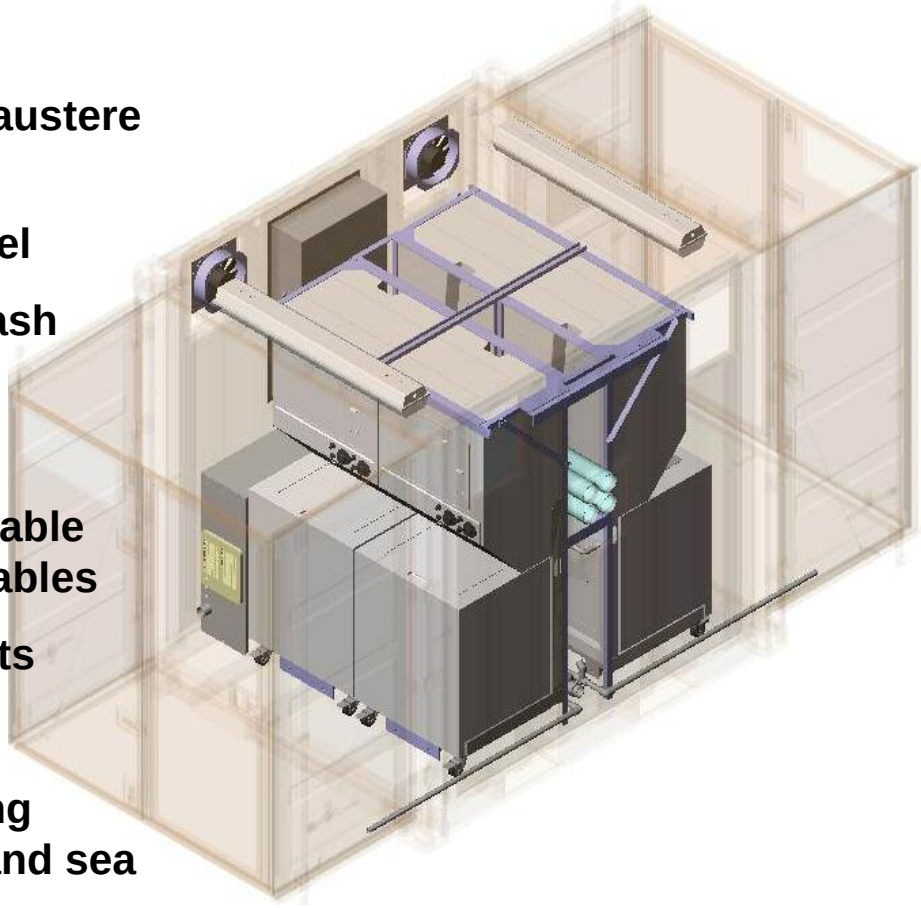
Expeditionary Tricon Self-Service Laundry

Capabilities

- **Supports smaller expeditionary units and austere tent camps**
- **Set-up time: 30 minutes with two personnel**
- **Allows the War Fighter the capability to wash his or her own clothing on site**
- **Environmentally Controlled**
- **System has four commercial Maytag stackable washer & dryer combinations and build-in tables**
- **Modular/Scalable & meets ISO requirements**
- **Can operate as a stand-alone system**
- **Containerized and preconfigured facilitating movement by any combination of land, air and sea**
- **Highly mobile, weigh less than 10k lbs, sling load and folk liftable,**



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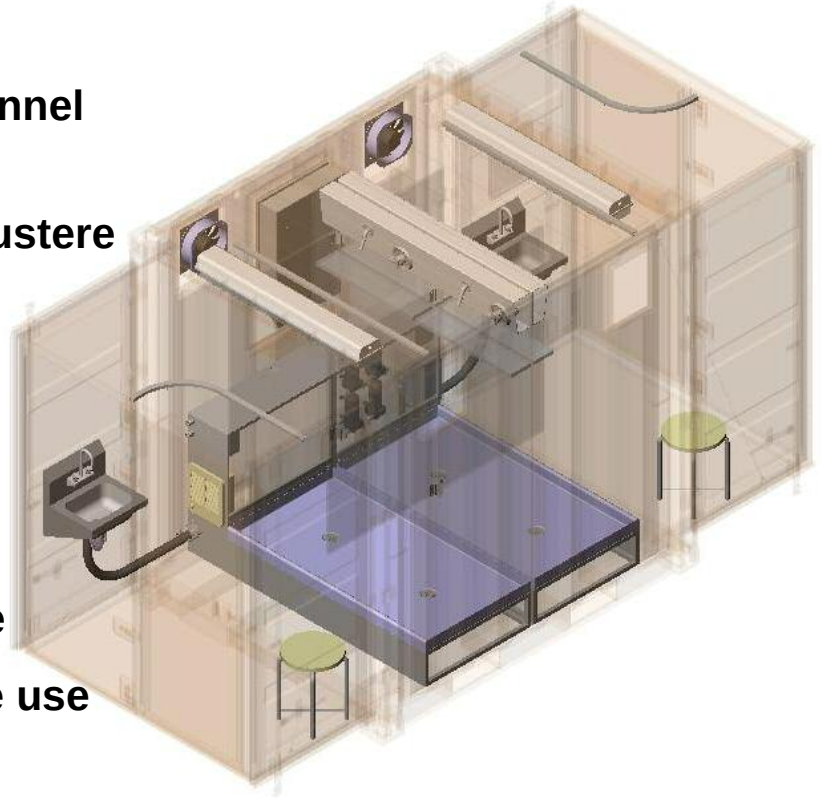
Expeditionary Tricon Shower System

Capabilities

- Provides a clean environment for 150 personnel to shower with privacy
- Supports smaller expeditionary units and austere tent camps
- Setup time: 30- minutes with two personnel
- Four individual stalls, two hand sinks and a changing area
- Each shower stall has individual controls for adjusting water pressure and temperature
- Separate entry on each side for male/female use
- Environmentally Controlled
- Modular/Scalable & meets ISO requirements
- Can operate as a stand-alone system



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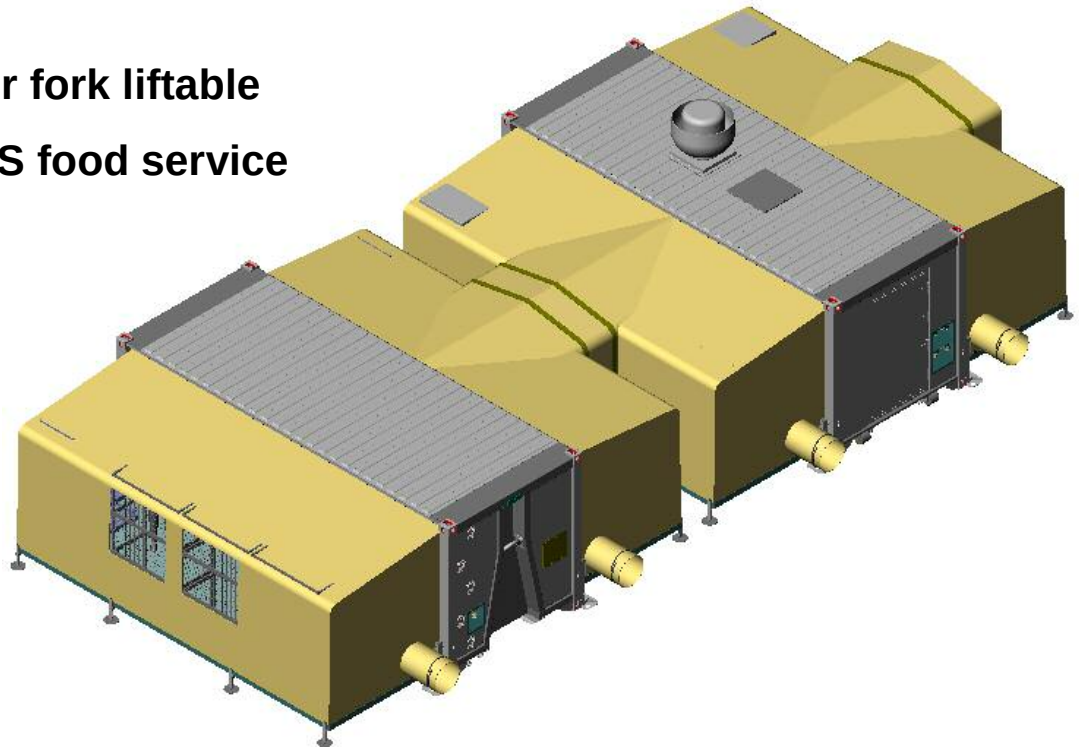
FP "Next Generation" All Electric Containerized Kitchen

Capabilities

- Provides for the preparation, cooking and serving of a minimum of 1800 "A" Ration meals per day
- Set up time: 3 to 4 hours with 4 personnel
- Housed in 3:1 ISO lightweight expandable containers
- Ventilation system exhausts heat and team during operation
- Integrated bail bar system (LHS), or fork liftable
- Uses all electric, high quality, COTS food service equipment
- All kitchen equipment is integrated and secured within the containers during transport



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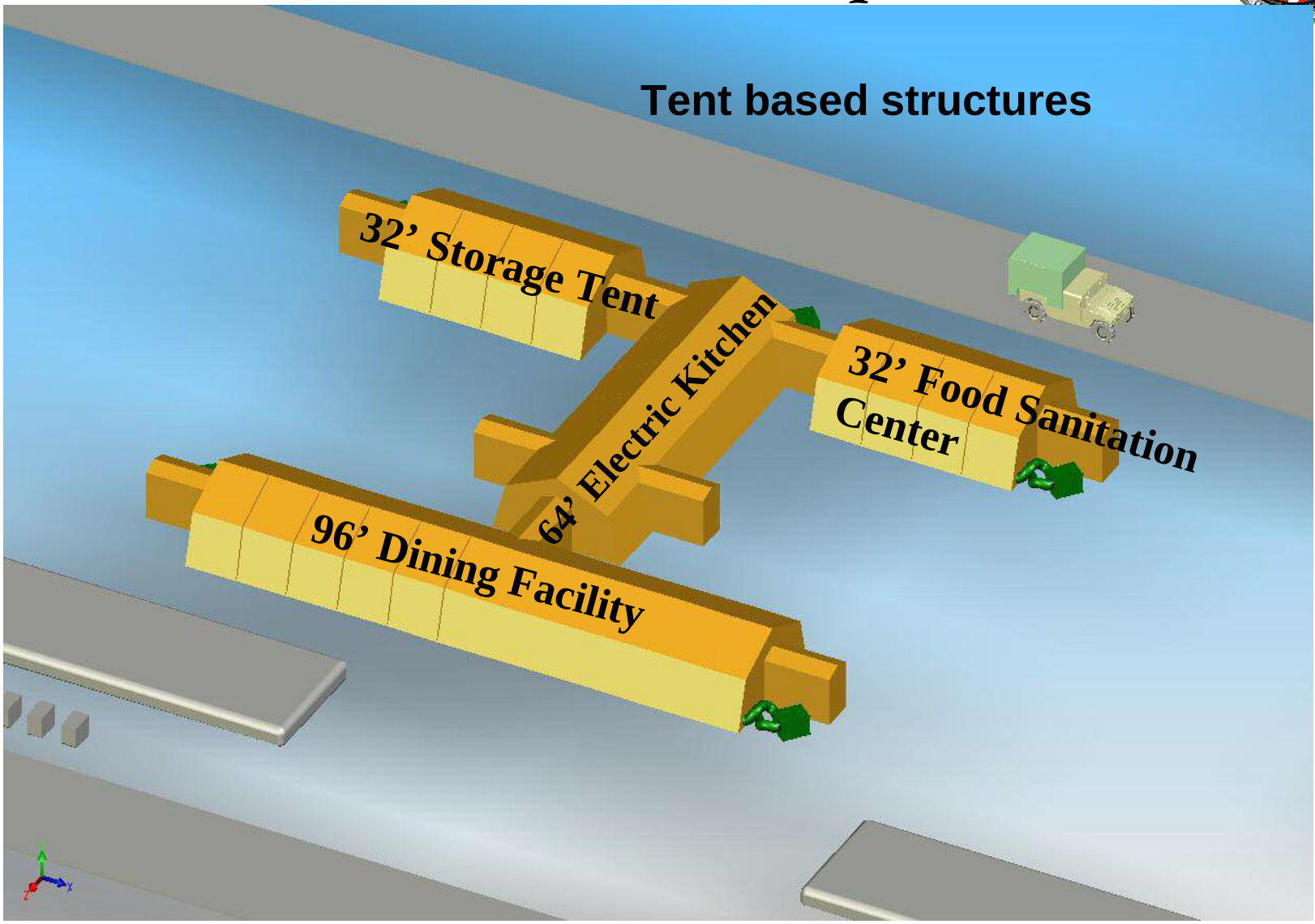
Current Force Provider
Tent Based Kitchen Complex



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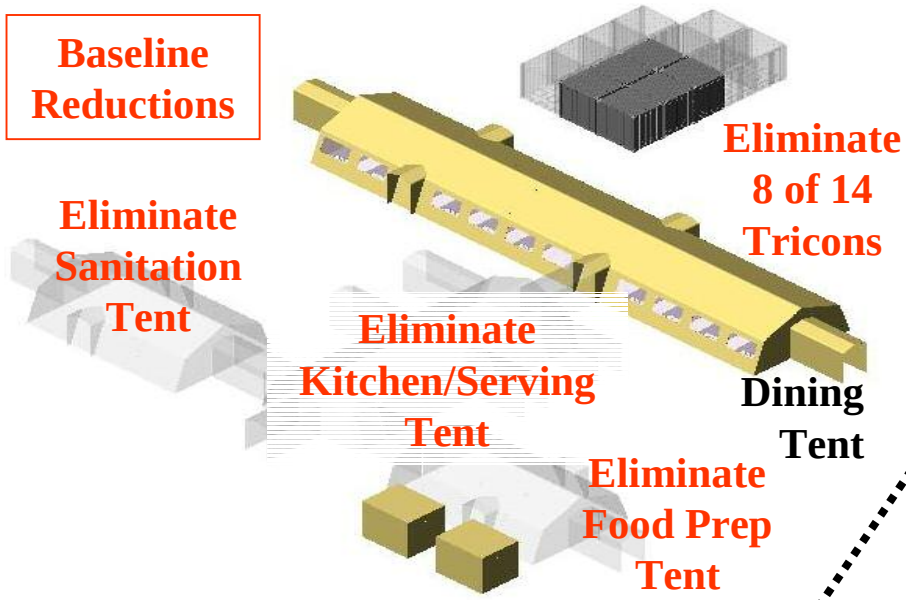
FP Kitchen Comparison

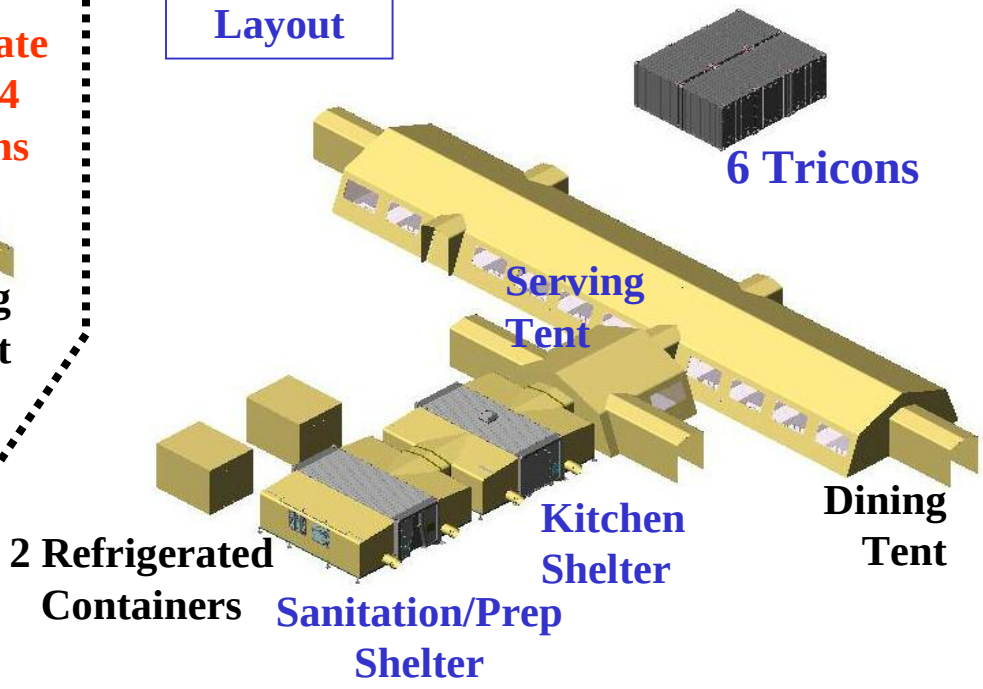
Current

Baseline Reductions



Concept

New Layout



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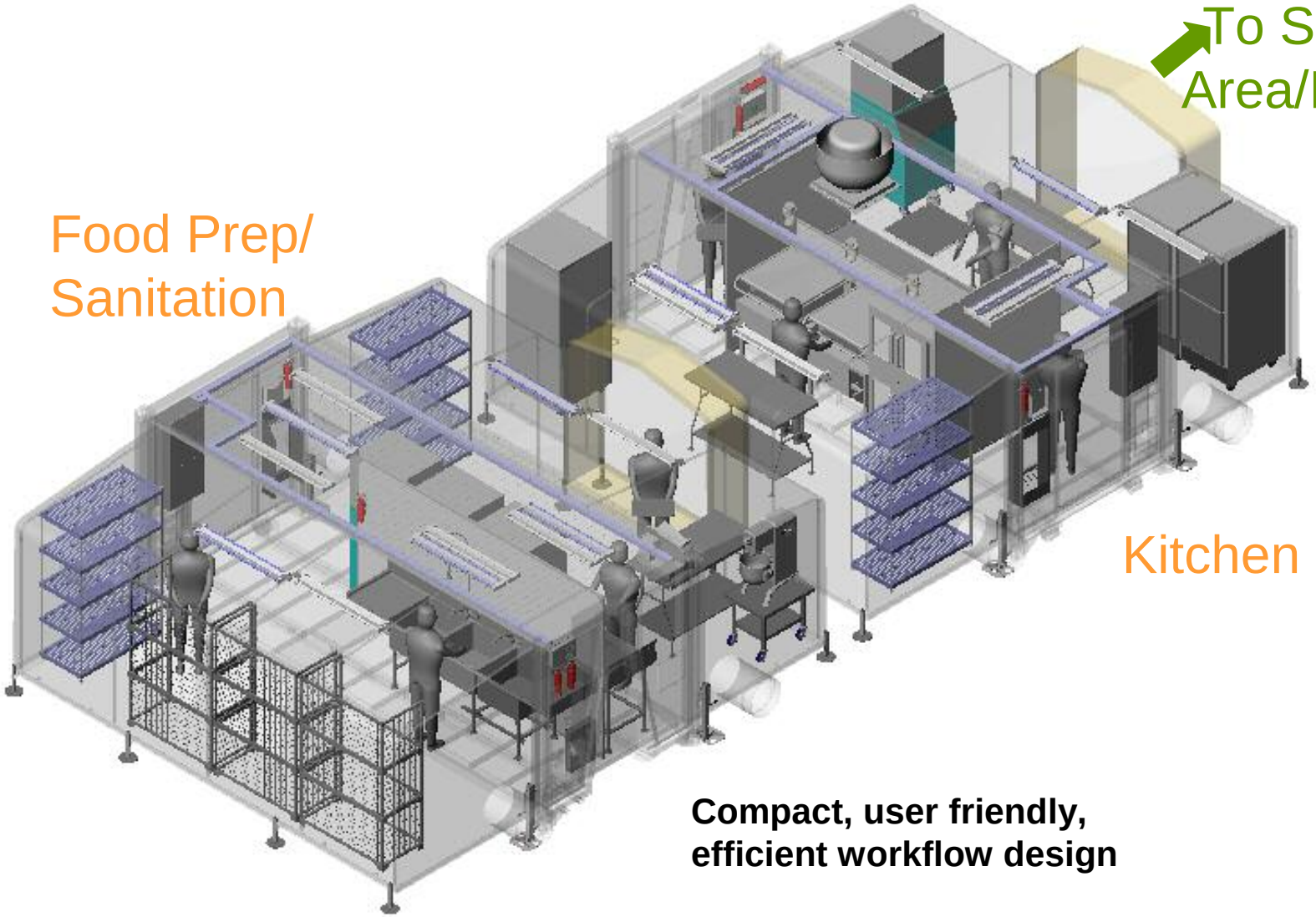
Electric Kitchen – Kitchen Workflow



Compact, user friendly, efficient workflow design

Containerized Electric Kitchen

Advantages

- **Reduce Transport/Footprint by eliminating 8 Tricons overall.**
- **Packout/Setup Time reduced by up to 60%. (3 days to 1 day)**
  - **eliminate wood floors**
- **All Equipment integrated**
- **Deployment manpower expected to decrease by 65%. (10 soldiers for 3 days to 8 soldiers for 1 day)**
- **Estimate decrease in Maintenance by up to 20%. (due to elimination of equipment)**
- **Life Cycle increase by 300%. (Tent life vs. shelter life)**
- **Decrease I/O requirements (less 23 hose assemblies, 1 manifold, 4 faucets, and 32 misc. fittings/connections)**
- **Eliminate M80 water heaters and lower fuel consumption.**

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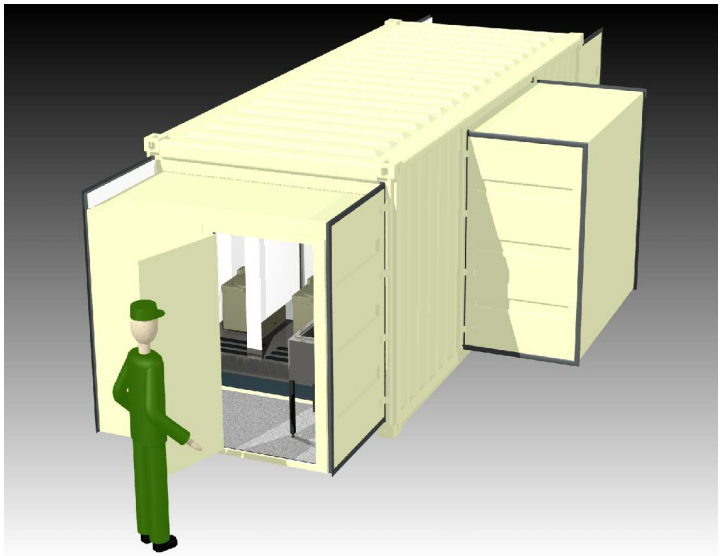
FP "Next Generation" Expeditionary Hygiene System (EHS)



Capabilities

- **Provides Soldiers with all life support systems in a single container (laundry, shower, latrine, & kitchen)**
- **LHS/PLS compatible**
- **20 minute setup with crew of 2**
- **Easily interfaces to any base camp system or stand-alone system**

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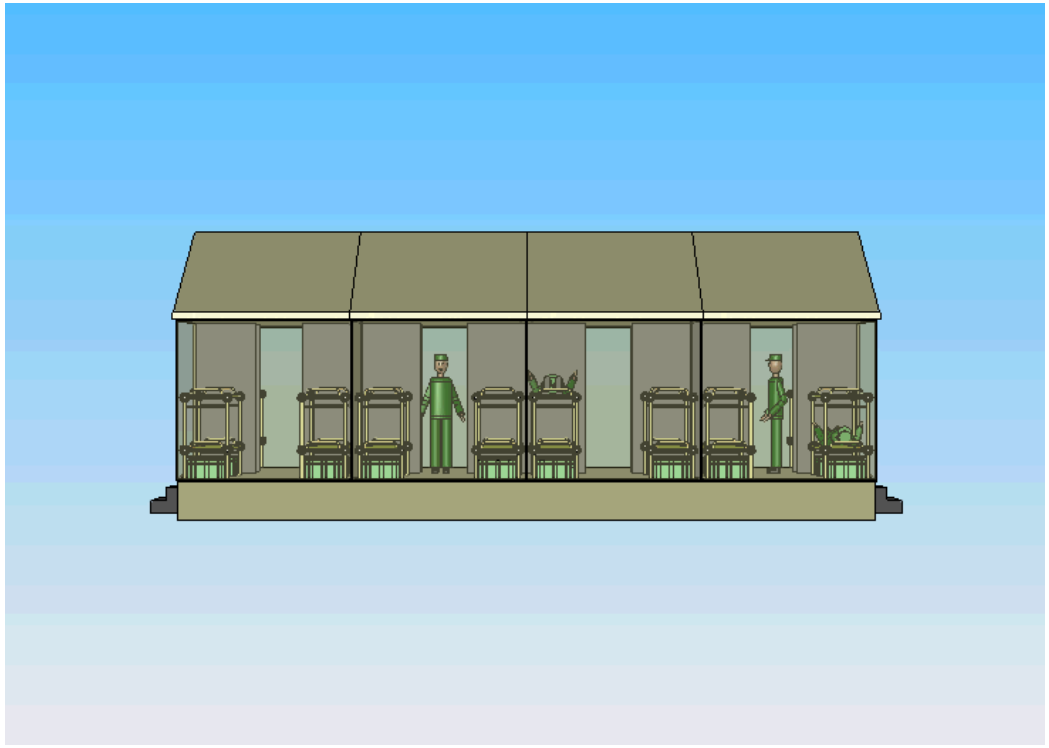
Force Provider – Rigid Wall Concept

Characteristics to meet FP requirement

- ISO compliment (stacking, rack, etc.)
- Expandable at least 5:1, or room for 32+ personnel
- Preinstalled utilities (heat / AC, lights, power outlets)
- High thermal efficiency (insulation value R=20+)
- Lightweight (under 10,000 lbs.)
- Quick setup time (equivalent or less than TEMPER)
- Fork lift pockets
- Capable of operating on single 60 amp power feed (208v, 3 phase)



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Where are we heading
AR 5-5 Study

Purpose: Identify appropriate missions, materiel requirements, and optimal configuration for FP operations to support Future Force requirements.

Deliverables: Joint Capabilities Integration and Development System (JCIDS) Documentation.

- Start Date – 15 June 04
- Functional Area Analysis (FAA) - Completed 25 August 04
- Functional Needs Analysis (FNA) - Completed 17 November
- Functional Solutions Analysis (FSA) - Completed 24 February 05
- Initial Capabilities Document (ICD) - Draft 4 May 05
  Final 15 June 05

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Draft Version 1.0 Dated 7 April 2005

INITIAL CAPABILITIES DOCUMENT FOR FORCE PROVIDER SYSTEM

Analysis of Materiel Approaches (AMA). The Functional Solutions Analysis (FSA) determined the best materiel approach or combination of approaches through a series of individualized general conceptual materiel solutions to make FP more relevant in sustaining the future joint expeditionary force.

"If FP is to remain a relevant sustainment enabler throughout the full spectrum of operations, its capabilities must have certain enhancements to include greater **scalability, modularity, deployability, and the capability to be delivered in smaller sets to support forces ranging from company (150 personnel) to UA Brigade (3600 personnel**). The FP FSA recommended the development of a TRICON based expeditionary system for the shower, latrine, laundry, and kitchen sub-systems."

Thomas Watt DSN 256-6451

Summary

Steel Castle Base
Jan 96

Must remain focused on the warfighter's needs

OEF Current

Remain Ready, Responsive, & Relevant!

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Questions

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